

**REMARKS****Drawing Objection**

In the Official Action of October 19, 2004, the drawings were objected to under 37 CFR 1.83(a). This objection is based on claim 10 of the application which calls for the carbonator to be in the carbonated water circulation circuit between the circulation pump and the heat transfer coils. To provide clarification, Figures 4 and 6 have been amended through the addition of reference numeral 127 specifically directed to the check valve. The phrase "check valve 127" was presented in the original specification in numbered paragraph [0051]. Thus, the recitations of claim 10 are more clearly established in Figures 4 and 6 with the addition of the reference number. A duplication of numbers has been corrected through changes in Specification paragraph [0050] and the addition of reference number 125 to the drawings. Reconsideration of the objection and acceptance of the proposed drawing changes to Figures 4 and 6, attached hereto with changes in red, is requested.

**Prior Art Rejections****A. Overview**

Turning to the rejections based on prior art, the following were asserted in the Official Action of March 16, 2005:

Claims 1-7, 9, 22, 25, 28 – anticipation Deering et al. (5433348)

Claims 8, 11-13, 16-19 – obviousness Deering et al. in view of Cragun (5450882)

Claim 10 – obviousness Deering et al. in view of Bethuy et al. (5732563)

Claims 23-24, 26-27, 29-30 – obviousness Deering et al. v. Newton  
(6230982)

Claims 14-15, 20-21 – obviousness Deering in view of Cragun in  
view of Newton

By this Amendment:

Claims 9, 13, 17, 23 and 28-30 have been cancelled.

Claim 1 has been amended to include the circulation pump capable of  
inducing circulation in the carbonated water recirculation circuit at  
less than 35 gal./hr.

Claim 5 has been amended to include the carbonator in the carbonated  
water recirculation circuit.

Claim 6 has been made more specific as to the locations of elements in  
the closed circuit

Claims 7 and 10 have been amended to agree with the amendment to  
claim 5.

Claim 8 has been clarified.

Claim 10 has been made dependent on independent apparatus claim 5.

Claim 11 has been amended to include the dispensing valve being of a  
bar gun and claim 13 has been cancelled as the feature thereof has  
been incorporated into claim 11.

Claim 16 has been narrowed through the addition of a recitation of a  
carbonator in the closed carbonated water circuit and claim 17 has  
been cancelled as the feature thereof has been incorporated into  
claim 16.

Therefore, all claims have been amended, either directly or through dependence on  
an amended claim. With these amendments, seven issues are presented for  
discussion. These issues are advanced based on a failure of the applied references  
to teach, suggest or motivate a specific element found in the combinations of specific  
claims. In summary, the elements, steps or features are:

- a. A bar gun in association with the compact recirculation system with heat transfer coils in an ice bin – all claims.
- b. The carbonator in the recirculation circuit – claims 5-10, 12, 16, 18-21, 25-27.
- c. The location of communication with the bar gun between the heat transfer coils and the carbonator – claims 6 & 7.
- d. The location of the recirculation pump between the communication with the bar gun and the carbonator – claim 7.
- e. The location of the carbonator downstream of the circulation pump and upstream of the heat transfer coils – claim 8
- f. The step of bringing the carbonated water to 33°F or below – claims 11-12, 14-21.
- g. The recirculation pump with a circulation rate of less than 35 gal./hr. or a capacity of about 15 gal./hr – claims 1-4, 14-15, 20-22, 24, 26-27.

#### **B. 35 U.S.C. 102**

Claims 1-7, 9, 22, 25 and 28 were rejected in the Official Action as anticipated by Deering et al. Of these, claims 1-7, 22 and 25 remain. These claims have been amended directly or through dependency on amended claims 1 or 5. Each of the rejected claims recites “a bar gun”. Claims 1-4 and 22 now recite the circulation rate of less than 35 gal./hr. Claims 5-7 and 25 now recite a carbonator in the carbonated water circulation circuit. In keeping with the positions presented in the Official Action, all claims rejected as anticipated now avoid anticipation through the amendments.

#### **C. 35 U.S.C. 103**

##### **a. All Claims**

Deering et al. was also asserted in the Official Action to support a rejection of claims 1-7, 9, 22, 25 and 28 as being obvious. Of these, claims 1-7, 22 and 25

remain. However, all remaining claims, claims 1-8, 10-12, 14-22, 24-27 recite some aspect of a bar gun and the following comments apply.

The recitation of the bar gun, properly interpreted in accordance with the standard established in the MPEP, is neither expressly nor inherently described in Deering et al. The terms used are to be appropriately construed. Plain dictionary meaning and meaning to those of skill in the art are required. Section 2111.01 of the MPEP reads in part:

I. THE WORDS OF A CLAIM MUST BE GIVEN THEIR "PLAIN MEANING" UNLESS THEY ARE DEFINED IN THE SPECIFICATION

...[T]he words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (discussed below)\*\*>; *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004) (Ordinary, simple English words whose meaning is clear and unquestionable, absent any indication that their use in a particular context changes their meaning, are construed to mean exactly what they say. \*\*\*

II. "PLAIN MEANING" REFERS TO THE >ORDINARY AND CUSTOMARY< MEANING GIVEN TO THE TERM BY THOSE OF ORDINARY SKILL IN THE ART

Claim terms are presumed to have the ordinary and customary meanings attributed to them by those of ordinary skill in the art. *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003); *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir. 2003)("In the absence of an express intent to impart a novel meaning to the claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art."). It is the use of the words in the context of the written description and customarily by those skilled in the relevant art that accurately reflects both the "ordinary" and the "customary" meaning of the terms in the claims. *Ferguson Beauregard/Logic Controls v. Mega Systems*, 350 F.3d 1327, 1338, 69 USPQ2d 1001, 1009 (Fed. Cir. 2003) (Dictionary definitions were used to determine the ordinary and customary meaning of the words "normal" and "predetermine" to those skilled in the art. In construing claim terms, the general meanings gleaned from reference sources, such as dictionaries, must always be compared against the use of the terms in context, and the intrinsic record must

always be consulted to identify which of the different possible dictionary meanings is most consistent with the use of the words by the inventor.); *ACTV, Inc. v. The Walt Disney Company*, 346 F.3d 1082, 1092, 68 USPQ2d 1516, 1524 (Fed. Cir. 2003).\*\*\*

The term "gun" is defined in the undersigns desk reference dictionary, Webster's New College Dictionary, 1996, in relevant part as:

1 a weapon consisting of a metal tube from which a projectile is discharged by the force of an explosive; specif., a) technically, a heavy weapon with a relatively long barrel fixed in a mount, as a cannon or machine gun b) a rifle c) popularly, a pistol or revolver...4 anything like a gun in shape or use....

The term "bar" is defined in relevant part in the same source as:

a) a counter at which alcoholic drinks and sometimes food are served b) an establishment or room with such a counter....

No definition was given in the source for a "bar gun".

Therefore, a "bar" "gun" is a very specific device. It has the appearance of a gun in the sense that it includes a head mounted to the end of a flexible conduit which can be aimed with buttons for triggering the release or dispensing of beverages. They have particular applicability to a bar. Stationary dispensing valves and nozzles are not referred to as bar guns by those of skill in the beverage dispensing art, witness the applied art. A declaration is attached from Gerald McCann to support this position.

The U.S. PTO has established the standard for a *prima facie* case of obviousness in MPEP §2142, which states in part:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of

success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 § 2143.03 for decisions pertinent to each of these criteria.

In Deering et al. there is no bar gun. The dispensing system is clearly and extensively described. Indeed, the modular dispensing tower is the only device illustrated in detail in the patent. Further, it is the modular nature of this tower which is said to save significant counter space (Col. 2, ll. 5-9). A bar gun does not use *any* counter space. The tower has fixed valves 15A-E (Col. 5, l. 66 – Col. 6, l. 3). There is no ability to hold the valves or aim the valves or select from multiple beverages from a single head. The glass must be taken to the tower rather than the tower to the glass.

The recitation of a bar gun in the combination of all claims makes the combination unique over Deering et al. The requirement to consider plain meanings which are ordinarily and customarily given to the terms by those of ordinary skill in the art does not allow a fountain dispensing tower to become a bar gun. No authority could be found in the MPEP for pronouncing a term to mean something for which there is no precedent in common usage or among those skilled in the art. There is no bar gun disclosed in Deering et al. The third criteria for a *prima facie* case of anticipation against all currently pending claims in the application cannot rely on Deering et al. to support the teaching of a bar gun. Applicants' traverse reliance on the assertion that a bar gun is an obvious choice as refuted above and requests support if the rejection is to be maintained under MPEP §2144.03C.

The Official Action asserts that "a specific bar gun for dispensing beverages is an obvious choice of the individual skilled in the art since there is no criticality or

unexpected result from it.” No bar gun, specific or otherwise is recited. Lack or criticality and unexpected result are not recited as criteria in the standard in MPEP §2142 for a *prima facie* case. And yet, criticality and unexpected result exist.

The presence of the bar gun is a critical component of the recited combination contributing to overall performance of the system and making the resulting combination unobvious under the standard required for a *prima facie* case of obviousness. Bar guns are most frequently employed in the context of a bar. They are designed to be small, flexible, convenient and taken to the glass rather than the other way around.

Using an ice bin for cooling of the beverages, also part of the combination, fits within the context of a bar as well. The ice bin is reasonably compact, does not generate heat such as generated by a refrigeration system, provides a supply of ice for use in drinks and provides superb cooling at the bottom thereof. As ice is needed at a bar, the added capacity to cool the beverages passing therethrough effectively provides convenience and compactness at no cost to space, flexibility and convenience, thereby serving the same attributes as the bar gun in a bar context.

The recirculation, also part of the combination, increases the efficiency of these attributes for both the bar gun and the ice bin. Bars are notorious for bad carbonated drinks, using a bar gun and conventional ice bin cooling. The bar gun, also with its small liquid retention capacity, ice bin cooling and recirculation of the claims work together to provide a compact, flexible and convenient system applicable to the bar environment.

By comparison, Deering et al. employs a modular dispensing tower rather than a bar gun. The point to Deering et al. is to create as compact an installation as possible with a fountain tower. Unstated but certainly of consideration is the attempt to make a fountain tower convenient in a bar, i.e., replace bar guns. Thus, there is no suggestion or motivation to change what Deering et al. is saying the fountain tower can do. The first criteria for a *prima facie* case of obviousness is, therefore, also lacking with teaching being contrary to such an application. Regardless of the assertions in the Final Official Action regarding Deering et al. and in Deering et al. itself, a dispensing fountain tower is incompatible with a bar environment because of space and lack of flexibility, .

A further comparison adverse to Deering et al. can also be made. The combination of the bar gun, the ice bin cooling and the recirculation of all claims provides a unique and surprising advantage not found in Deering et al., the maintenance of carbonated water at a temperature of 33° F or below. In the system of Deering et al., 34° F is the limit contemplated. The larger liquid retention volume of a dispensing tower, rather than a bar gun, does not allow Deering et al. to assert a temperature 50% closer to the freezing of water. Many of the claims do not limit the equipment to the maintenance of a specific temperature. However, the incorporation of the bar gun in the combination claimed allows for that advantage.

Thus, the recited bar gun, ice storage bin with heat transfer coils therein and recirculation provide specific advantage when used together, appear to have greater capability than a buffered refrigeration system or ice storage bin with a necessarily larger dispensing fountain tower and better satisfy the requirements of a bar



environment. The rejections of all claims remaining in the application rely on Deering et al. for the bar gun element. The first and third components of the standard for a *prima facie* case of obviousness as to all claims are unsupported by Deering et al. The recited bar gun element in all pending claims is not taught or suggested. The bar gun in combination provides meaningful cooperative features and advantages not suggested or motivated by Deering et al.

**b. Claims 5-10, 12, 16, 18-21, and 25-27**

The Official Action rejects claims 8, 11 through 13 and 16 through 19 as obvious over Deering et al. in view of Cragun. The feature discussed, the carbonator in the recirculation line, is now found in all of claims 5-8, 10, 12, 16, 18-21, 25-27 with the foregoing amendments. The feature was rejected under a combination of Deering et al. and Cragun. As recognized in the Official Action, Deering et al. does not provide a carbonator in a recirculation circuit. Cragun includes a recirculation circuit including a carbonator 312 which has nothing to do with a recirculation circuit to a dispensing valve. This recirculation circuit is described in Cragun at column 7, beginning on line 39:

The present invention also employs a unique carbonator which maximizes the quality of the carbonated water to be dispensed. A recirculation line is provided on the carbonator by which water in the carbonator is removed from the carbonator and pumped back through the carbonator through an atomizer, thereby further carbonating the water. By recirculating the carbonated water through the carbonator, the degree of carbonation of the water is maximized.

The detailed description provides further teaching at Col. 26, line 19 et seq.:

Within the carbonator 312, a reservoir 322 of carbonated water is maintained. The present invention utilizes a novel recirculation tube 324 within the carbonator 312 through which carbonated water is removed from the bottom portion of the reservoir 322. A recirculation line 326 carries the recirculated water from the recirculation tube 324 through three-way valve 302 and back into the carbonator 312 as previously described. By recirculating the water within the reservoir 322 of the carbonator 312, the water is carbonated as closely as possible to its saturation point, thereby maximizing the quality of the beverage which is ultimately dispensed through the device.

Deering et al. provides recirculation for cooling. Cragun is directed to carbonator performance and provides recirculation for repeated atomization and mixing of water with CO<sub>2</sub> gas to maximize carbonation. Indeed, it is likely that the continuous recirculation through the atomizer imparts substantial heat energy to the fluid. The purposes are diverse and the recirculation is not in a circuit in communication with the bar gun.

Deering et al. includes a recirculation function for cooling. But there is no inclusion of the carbonator in the recirculation circuit. Deering presents a separated carbonator which relies on its own mechanism for cooling, a coil in the inlet line to the carburetor. Cragun cools after the carbonator in two separate mechanisms prior to dispensing the carbonated water. They do not involve recirculation through the carbonator. The recirculation of Cragun through the carbonator teaches an entirely different use that, if appropriately combined with Deering et al., would simply add a further mechanism associated with the carbonator to increase saturation through atomization. Cragun does not suggest the addition of the carbonator to the cooling recirculation circuit of Deering et al.

Thus, the first criteria in the U.S. PTO standard for a *prima facie* case of obviousness is not supported by the combination of Deering et al. and Cragun. There is no teaching, suggestion or motivation in either reference to modify one of the references or to combine reference teachings to place the Deering et al. or Cragun carbonators in the Deering et al. circulation circuit. All claims of the present application place the carbonator in the recirculation circuit.

**c. Claims 6 and 7**

Amended claims 6 and 7 included in the rejection based on Deering et al. alone, provide further features not found in Deering et al. in addition to the recitation of the bar gun and the inclusion of the carbonator in the recirculation circuit discussed in separate sections.

Claim 6 specifically locates the communication of the bar gun as being between the heat transfer coils and the carbonator with flow from the heat transfer coils toward the carbonator. This is of significance because recirculation is not through the carbonator in flow between the coils and the bar gun. This arrangement is substantially different from and advantageous over that of Deering et al. In Deering, the carbonator is not prevented from directly contributing to the flow to the dispensing tower without proceeding through cooling. Therefore, the separate carbonator must have its own cooling (Col. 8, l 13 et. seq.) to insure cold drinks. The structure and function of Deering et al. simply do not apply and cannot satisfy at least the third requirement for a *prima facie* case of obviousness based on this recitation alone in claims 6 and 7.

**d. Claim 7**

Additionally, Deering et al. fails to indicate the location of the recirculation pump. The specific location of the circulation pump in claim 7 directs flow from the carburetor either continuously or when a dispensing valve in the bar gun is open, depending on the embodiment, to the heat transfer coils. The location of the pump can be used to insure that warm make-up water to the carbonator is not directed to the bar gun without first passing through the heat transfer coils. By comparison, Deering et al. requires separate cooling of the inlet water to the carbonator (Col. 8, l 13 et. seq.). As this feature and function are additionally not found in Deering et al., the reference cannot serve as a basis for a *prima facie* case of obviousness of claim 7.

**e. Claim 8**

The location of the carbonator downstream of the circulation pump and upstream of the heat transfer coils recites flow as being toward the heat transfer coils from the carbonator. Thus, new potentially warm carbonated water is forced toward the heat transfer coils for at least a first pass. Deering et al. has no teaching of this arrangement, nor is there a suggestion or motivation thereof. A *prima facie* case is not supported by Deering et al. on this advantageous feature.

**f. Claims 11-12 and 14-21**

Claims 11-12 and 14 through 21 are rejected on various combinations of references with Deering et al. which are specifically treated in other sections. Further, these claims all have one important feature which has been discounted in the Official Action. Each of claims 11 through 21 includes the temperature value for the

carbonated water to be 33°F or below. Deering et al. is presented in the Final Official Action as support for this low temperature but does not do so in fact.

This temperature of 33°F or below is accomplished through the recirculation in association with an ice storage bin including heat transfer coils and a bar gun, a device with small capacity. As discussed above, Deering et al. uses a refrigeration unit with a cooling chamber buffer unit or an ice bin without the carbonator in circuit. Deering et al. equivocally states what its system is capable of doing in column 4, line 1 et seq.:

That is, by recirculating the carbonated water from the modular dispensing tower back to the cooling unit during periods of non-use, the carbonated water remains at the lowest temperature possible (i.e.), approximately 34° F.(.) Accordingly, a dispensed drink will have extremely cold carbonated water.

When using a cooling system which is theoretically maintained at 32°F (an ice bin), heat transfer from another liquid to get to that temperature becomes more and more difficult. This is because the difference in temperature is so small between the cooling mixture and the liquid to be cooled. The difference between 34°F and 33°F, therefore, becomes significant. Indeed, 33°F is 50% closer to the freezing temperature of the ice in the ice bin than 34°F. The ability of the present system to achieve 33°F and below is vastly different from reaching 34°F, the minimum equivocally possible using the Deering et al. device. Further, the ability to take carbon dioxide into solution is also different between these two temperatures with the lower temperature being able to absorb more. To discount the difference where the present system can get 50% closer to freezing is inconsistent with the physics involved and

with the teaching of Deering et al. identifying 34°F as the minimum possible. Deering et al. cannot support a *prima facie* case of obviousness of claims 11 through 21 specifically reciting the 33°F temperature.

The elements contributing to achieve that degree of cooling are recited in these claims, a bar gun which necessarily has a small capacity (claims 11, 12, 14-16, 18-21), the ice bin recirculation cooling (claims 11, 12, 14-16, 18-21), the carbonator in the recirculation circuit (claims 12, 16, 18-21), the low flow pump (14, 15). The method as variously expressed in claims 11, 12, 14-16, 18-21 provides a performance that is unanticipated and significant. The teaching of Deering et al. does not support a *prima facie* case of obviousness in the claims that recite a maintenance temperature in the carbonated water of 33°F.

**g. Claims 1-4, 14-15, 20-22, 24 and 26-27**

Claims 14, 15, 20, 21, 23, 24, 26 and 27 stand rejected in the Final Official Action based upon the teachings of the references above and Newton. These claims recite pump flow or capacity. Now all of claims 1-4, 14-15, 20-22, 24 and 26-27 include recitations to the pump flow or capacity with specific reference to less than 35 gal./hr. and/or about 15 gal./hr.

Newton is directed to a fluid dispensing valve for the dispersion of a nonsoluble liquid into another liquid. No pumping capacity is discussed. Newton states at column 8, beginning on line 37:

The valve 10 of the instant invention can readily disperse a fluid flow as low as 0.001 gallon per hour up to a flow rate as high as about 3000 gallons per hour, preferably from 0.001 gallon per hour to 1 gallon per hour, and more preferably from 0.025 gallons per hour to 0.075 gallons per hour. For

flow rates in the range of about 0.1 to about 35 gallons per hour, an orifice in the range of about 0.125 inch can be used to provide satisfactory results. For flow rates in the range of about 35 to about 130 gallons per hour, an orifice in the range of about 0.250 inch is preferably used.

This valve has nothing to do with pumps, pumping capacity, cooling rates, or concerns about temperature. Recirculation at 35 gallons per hour or less provides for improved cooling while not imparting significant energy to the liquid to result in a temperature rise. The Newton device appears to have no utility in the Deering et al. patent and none is stated in the Final Official Action. Particularly, there is no teaching of a specific range of pump capacity.

From these teachings, all three criteria required for a *prima facie* case of obviousness appear missing from this rejection. There is no suggestion or motivation for the combination of the nozzle of Newton with the recirculation circuit of Deering et al. There is no reasonable expectation that such a nozzle would contribute to the recirculation circuit. Finally, no pump is described in Newton or any of the other references operating at less than 35 gallons per hour or at about 15 gallons per hour. Consequently, there can be no support for obviousness in the combination of Newton with the other references.

## **Conclusion**

The foregoing comments reference specific features which are not found in the applied references. To assist in review, the features have been lettered in Section A of these Remarks which also track the letter paragraphs of Section C of these Remarks. The claims and the corresponding features recited in each have here been set forth using the lettered features as follows:

Claim 1. ag  
 Claim 2. ag  
 Claim 3. ag  
 Claim 4. ag  
 Claim 5. ab  
 Claim 6. abc  
 Claim 7. abcd  
 Claim 8. abe

Claim 10. ab  
 Claim 11. af  
 Claim 12. abf  
 Claim 14. afg  
 Claim 15. afg  
 Claim 16. abf  
 Claim 18. abf  
 Claim 19. abf

Claim 20. abfg  
 Claim 21. abfg  
 Claim 22. ag  
 Claim 24. ag  
 Claim 25. ab  
 Claim 26. abg  
 Claim 27. abg

All of the claims, as amended, have been shown to recite the referenced features not found in the applied references. The claims each include two or more of the bar gun, a carbonator in the recirculation system, a pump with recited capacity, the step and ability to reach 33°F and order of elements in the recirculation circuit. The standard for a *prima facie* case for obviousness requires that there be an accounting in the prior art of all components recited in the claims. There also must be some suggestion or motivation for the combinations. Nothing suggests a bar gun in communication with the recirculation system, the carbonator of Deering et al. in the recirculation circuit, that the flow rate or recirculation be substantially lower than an ideal drink distribution rate, or that the cooling can get within one Fahrenheit degree of the freezing temperature of water. Finally the advantageous location of components in the recirculation system to handle both low flow and high flow through the ice plate without compromising cooling is not disclosed, suggested or motivated by the applied references. A *prima facie* case of obviousness is not supported by the references applied.

Applicants' have carefully illustrated the differences, failings and differing purposes of the prior art that make *prima facie* cases unsupportable. Additionally, the



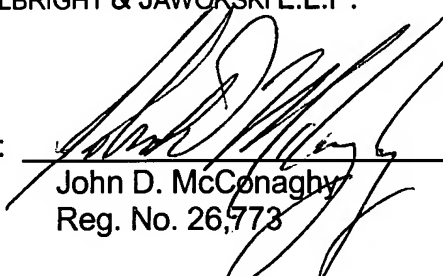
drawings and Specification have been corrected in keeping with the comments of the Final Official Action. Consequently, a Notice of Allowance is earnestly solicited.

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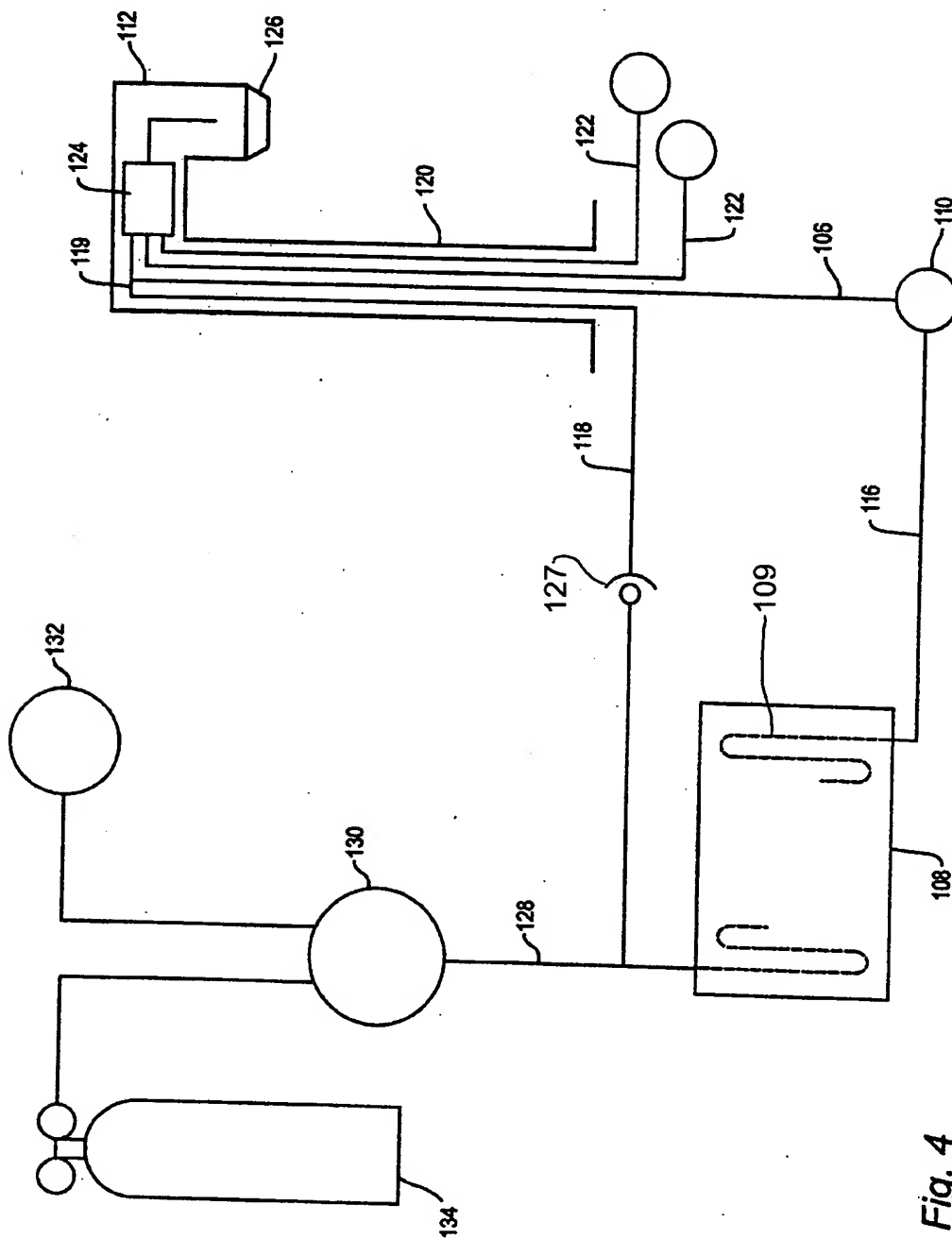


Fig. 4

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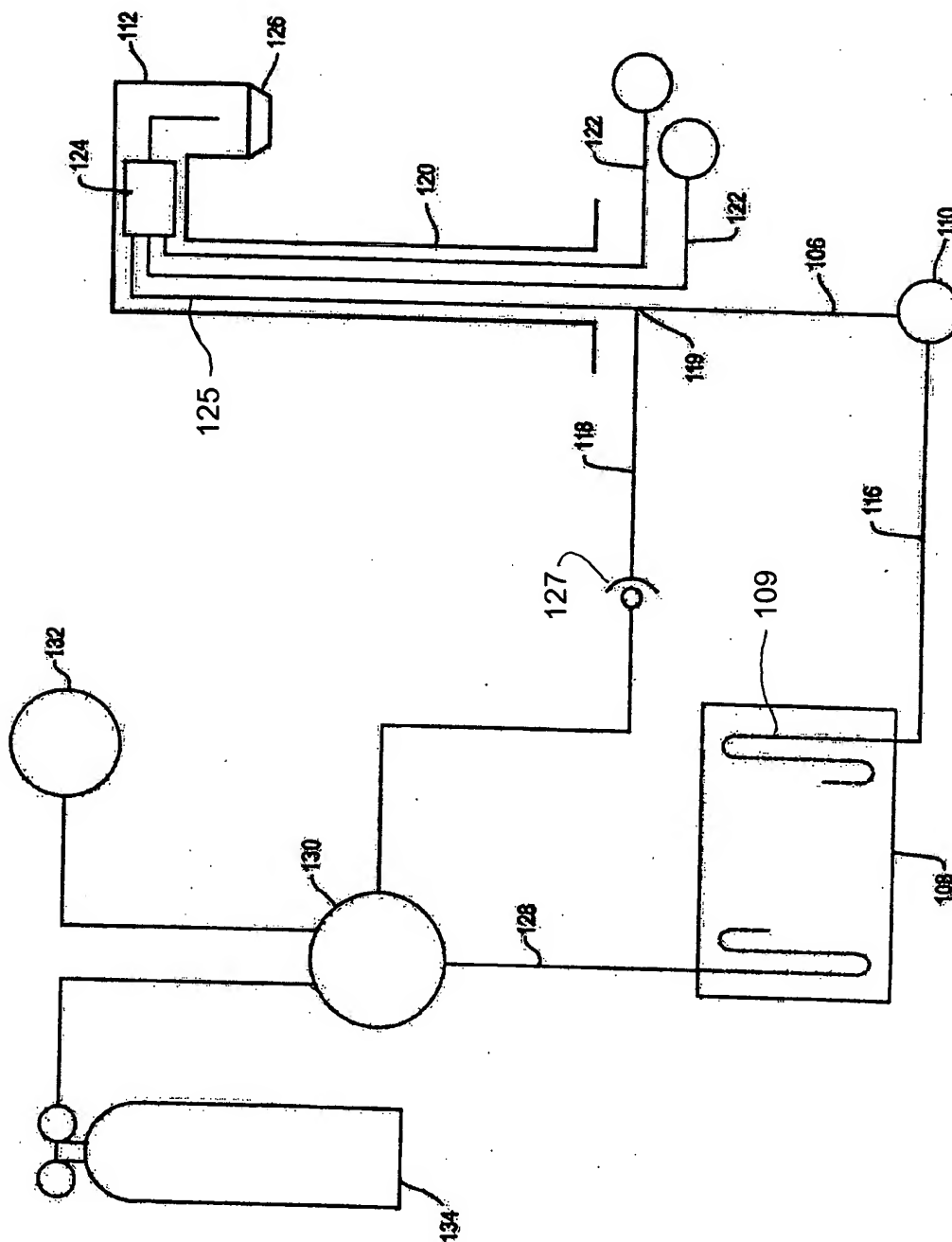


Fig. 6